

said lower surface being substantially parallel to each other and separated by a distance comprising the height of the block, said lower surface having a smaller area [proportion] than said upper surface, and opposed first and second sidewall surfaces [separated by a distance comprising the width of the block], said sidewall surfaces adjoining said block upper and lower surfaces, [both] each of said first and second sidewall surfaces comprising a first part and a second part, said sidewall surface first parts [surfaces] extending from said block front surface towards said block back surface, and intersecting the front surface at an angle of ninety degrees or less [in relationship to said block front surface], said sidewall surface second parts [surfaces adjoining and lying between] joining their respective sidewall surface first parts and said block back surface, each sidewall surface second part intersecting the back surface at an angle of less than ninety degrees; and

b) a flange extending from the block back surface past the height of the block, said flange comprising a setback surface and a locking surface, said setback surface

extending from the lower rear edge of the flange [in a plane parallel to the block upper and lower surfaces and] towards said block front surface to adjoin said flange locking surface, said locking surface extending [from] below the plane of said block lower surface [adjoining and lying between said setback surface and said block lower surface].

c) wherein the top surface and the sidewall surfaces are generally solid and continuous across their entire extents.

Please amend claim 30 as follows:

30. (Amended) A retaining wall block suitable for use in

forming a mortarless retaining wall, said block comprising:

- a) a pair of substantially parallel and planar upper and lower faces;
- b) a front face joining the upper and lower faces, which is substantially perpendicular to the upper and lower faces;
- c) a [substantially planar] rear face which is substantially perpendicular to the upper and lower faces;

C.J.

- d) a pair of [substantially planar] side faces joining the front and rear faces, the side faces being substantially perpendicular to the upper and lower faces, and [converging] including rearwardly converging portions [as they extend from the front face toward the rear face, so that they are closer together at the rear face than they are at the front face], wherein a line drawn on the upper face through the points where the rearwardly converging portions begin is substantially parallel to a line drawn through the points where the side faces join the rear face; and
- e) a flange extending below the lower [surface] face of the block, said flange having a [substantially planar] rear [surface] face which is substantially [coplanar with] an extension of the rear [surface] face of the block, said flange further including a front locking surface which intersects the lower [surface] face of the block;
- f) wherein the upper face and the side faces are substantially solid and continuous throughout their extents:

g) and wherein the area of the upper face is greater than the area of the lower face.

Please add new claims 50 - 74 as follows:

22. The block of claim 38 wherein the rear face of the block includes a substantially planar portion which is parallel to the line drawn through the points where the side faces join the rear face of the block.

23. The block of claim 22 wherein the front locking surface of the flange includes a substantially planar portion which is substantially parallel to the substantially planar portion of the rear face of the block.

24. The block of claim 23 wherein each side face further includes a forwardly converging portion that intersects the front face at an angle of less than 90 degrees.

25. The block of claim 24 wherein the rearwardly converging side face portions each intersect the rear face at an angle of less than 90 degrees.

26. The block of claim 25 wherein the rearwardly converging side face portions each intersect the rear face at an angle between about 30 degrees and about 60 degrees.

27 55. The block of claim 52 wherein the ratio of the front-to-back depth of the block to the depth of the flange is at least about 6:1.

28 56. A composite masonry block suitable for use in forming straight and serpentine retaining walls having a set back from course to course, said block comprising:

- a) a block body and an integral locator lip formed in a mold with generally vertical sidewalls, an open top and an open bottom seated upon a generally horizontal flat pallet, by a process comprising the steps of:
 - i) filling the mold via its open top with a masonry block mix comprising sand, aggregate, and cement;
 - ii) vibrating the masonry block mix within the filled mold;
 - iii) compacting the masonry block mix within the mold by the action of a compression head pushed down on the masonry block mix through the open top of the mold, whereby the masonry block mix forms an uncured unit having the shape imparted to it by the mold, the pallet on which the mold rests, and the compression head;

11

CJ

- iv) stripping the uncured unit from the mold via the open bottom of the mold by the combined, relative vertical action of the compression head and the pallet with respect to the mold, whereby, after stripping, the uncured unit rests on the pallet unsupported by the mold;
- v) transporting the uncured unit to a curing location;
- vi) curing the uncured unit at the curing location to create a cured unit;
- vii) transporting the cured unit from the curing location to a splitting location; and
- viii) splitting the cured unit transversely to form at least one finished composite masonry block;

b) said block body comprising:

- i) a generally horizontal upper surface;
- ii) a generally horizontal lower surface having a smaller gross area than that of the upper surface;
- iii) a generally vertical front surface;
- iv) a generally vertical back surface, said front and back surfaces being separated by a distance comprising the depth of the block;

v) a generally vertical first sidewall extending from the front surface to the rear surface, and extending from the upper surface to the lower surface, said first sidewall including a first part that extends away from the front surface at an external angle of less than ninety degrees with respect to the front surface, and a generally planar second part that lies between the sidewall first part and the back surface, and intersects the back surface at an external angle of less than 90 degrees; and

vi) a generally vertical second sidewall opposed to the first sidewall, and extending from the front surface to the back surface, and extending from the upper surface to the lower surface, said second sidewall including a first part that extends away from the front surface at an external angle of less than 90 degrees with respect to the front surface, and a generally planar second part that joins the sidewall first part and the back surface, and intersects the back surface at an external angle of less than 90 degrees;

7

- vii) said block body upper surface being formed by the pallet upon which the mold seats during the molding process, and being substantially planar, substantially solid, and substantially continuous across its whole extent from its intersections with the front surface, the back surface, and each sidewall as a result;
- viii) said block body lower surface being formed by the compression head during the molding process, and being substantially planar as a result;
- ix) the second parts of the block body sidewalls being formed by the corresponding vertical walls of the mold during the molding process, and being substantially solid and continuous across their whole extents as a result;
- x) said block body back surface being formed by corresponding vertical walls of the mold during the molding process;

c) said integral locator lip including a back surface which is an extension of the back surface of the block body, and a forwardly facing locking surface which extends below the lower surface of the block body, the

depth of said locator lip being the distance between its locking surface and its back surface measured in the plane of the lower surface of the block body, and wherein the ratio of the depth of the block body to the depth of the locator lip is at least about 6:1;

i) wherein the locking surface is formed by a corresponding surface of the compression head during the molding process.

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~~57~~. The composite masonry block of claim ²⁸~~56~~ wherein the block body front surface is formed by the action of one or more splitter blades which are oriented generally perpendicularly to the upper and lower surfaces of the block body when the cured unit is at the splitting location, and, as a consequence, said block body front surface is irregular, but generally rectangular and generally planar within the limits of the splitting process to produce such a surface.

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~~58~~. The composite masonry block of claim ²⁸~~56~~ wherein the block body sidewall first parts are formed by the action of one or more splitter blades which are oriented generally perpendicularly to the upper and lower surfaces of the block body when the cured unit is at the splitting location, and, as a consequence, said sidewall first parts are irregular, but generally rectangular and

generally planar within the limits of the splitting process to produce such a surface.

~~31~~ 59. The composite masonry block of claim ~~58~~ ³⁰ wherein the sidewall first parts intersect the sidewall second parts at a distance from the front surface equal to between about one fifth and about one quarter of the depth of the block body.

~~32~~ 60. The composite masonry block of claim ~~56~~ ²⁸ wherein the locator lip is continuous, and extends substantially from sidewall to sidewall.

~~33~~ 61. The method of claim 56, wherein the cured unit is split to form at least two finished composite masonry blocks.

~~34~~ 62. The composite masonry block of claim ~~56~~ ²⁸ wherein the cured unit is transported from the curing location to a storage location prior to being transported to a splitting location.

~~35~~ 63. The composite masonry block of claim ~~56~~ ²⁸ wherein the cured unit is transported directly from the curing location to a storage location prior to being transported to a splitting location.

~~36~~ 64. The composite masonry block of claim ~~56~~ ²⁸ wherein the cured unit is transported directly from the curing location to a splitting location.

317 85. The composite masonry block of claim ~~56~~²⁸ wherein the locator lip comprises a setback surface between the locking surface and the back surface of the lip, which is formed by a corresponding surface of the compression head during the molding process.

318 86. A composite masonry block suitable for landscape applications, comprising:

- a) a solid and generally planar top face;
- b) a bottom face which is generally parallel to the top face;
- c) a rear face which is generally perpendicular to the top and bottom faces;
- d) a front face which is generally perpendicular to the top and bottom faces, and which includes opposed portions which diverge as they extend towards the rear face of the block;
- e) opposed solid side faces which are generally perpendicular to the top and bottom faces, each of said solid side faces extending from an opposed diverging portion of the front face to the rear face, said side faces converging as they extend towards the rear face;
- f) a lower rear locator lip formed integrally with the bottom face of the block, and located adjacent to the

rear face of the block, so that the lip is adapted to establish a uniform setback from course to course when a plurality of like blocks are laid in course, and comprises a rear face which is an extension of the block rear face below the bottom face of the block.

39. 61. The block of claim 66 wherein the opposed diverging portions of the front face are generally planar.

40. 68. The block of claim 66 wherein the rear face is generally planar.

41. 69. A concrete block suitable for constructing straight and curved retaining walls without pins or mortar, and capable of being mass produced by automated block-making machines, said block consisting essentially of:

- a) a block body having a generally horizontal and substantially planar upper surface and a generally horizontal and substantially planar lower surface, said upper surface and said lower surface being substantially parallel to each other and separated by a vertical distance which is the height of the block;
- b) said block body having a generally vertical first front surface and a generally vertical back surface, said first front surface and said back surface being

substantially parallel to each other and generally perpendicular to said upper and lower surfaces of said block, said first front and back surfaces being separated by a horizontal distance comprising the depth of the block;

c) a flange or lip integrally formed with the block and extending downwardly from the lower surface of the block along intersection of the lower surface of the block with the back surface of the block to a point below the lower surface of the block, the rear face of the flange being an extension of the back surface of the block, said flange comprising a lower setback surface and a forward-facing locking surface;

d) said lower surface having a smaller surface area for block-to-block contact than the surface area of said upper surface, said smaller surface area being the result of the formation of the flange on the lower surface;

e) said block having generally vertical two-part left and right sidewall surfaces, each of said left and right sidewall surfaces comprising a substantially planar first or front part and a substantially planar second

or rear part, said first parts having surfaces which do not diverge relative to each other in the direction of said block front surface, and said second or rear parts having surfaces which converge in the direction of said block back surface; and

f) the top surface and both sidewall surfaces of said block being substantially solid and continuous across their entire extents.

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20. The block of claim ~~69~~ wherein each of said front parts of said side surfaces converges toward the first front face, said front parts of said side surfaces functioning as additional front faces for the block.

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21. The block of claim ~~70~~ wherein each of said front parts of said side surfaces is a split face and wherein the first front face of the block is also a split face.

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22. The block of claim ~~69~~ wherein each of said front parts of said side surfaces is substantially perpendicular to the first front face.

45 41-44
23. The block of any of claims ~~69-72~~ wherein the rearwardly converging side surfaces each intersect the back surface of the block at an angle between about 30 degrees and about 60 degrees.